

REMARKS

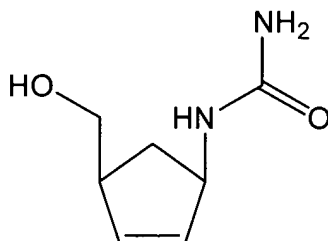
Reconsideration and allowance are respectfully requested. Claims 6-15 have been canceled without prejudice. Claims 1-5 have been amended to positively recite the steps of the claimed process and to correct other informalities. Claims 4 and 5 have been amended to include standard Markush terminology for reasons unrelated to patentability. Dependent claims 16-23 have been added. Support for claims 16-23 is found at page 1, lines 1-5; page 4, lines 3 and 16; page 4, line 39, to page 5, line 1; Examples 1.2 through 1.13 and original claims 1 and 13. A marked up version of the amended claims is attached. No new matter has been added. Accordingly, claims 1-5 and 16-23 are pending and at issue.

Claims 1-5 have been rejected under 35 U.S.C. §112, second paragraph, as indefinite. In particular, the Examiner asserts that claim 1 does not recite positive and clear steps to the process and that there is no antecedent basis for the terms "the racemate" and "the reduction". Claim 1 has been amended to positively recite clear steps and provide proper antecedent basis. The Examiner also requests that claims 4 and 5 include standard Markush terminology. Claims 4 and 5 have been amended to include standard Markush terminology. Accordingly, applicants respectfully request withdrawal of this application.

Claims 1-5 have been rejected under 35 U.S.C. §102(b) as anticipated by Katagiri *et al.*, *Chem. Pharm. Bull.*, 39(5):1112-1122 (1991). The Examiner asserts that the process recited in claims 1-5 is described in chart 13 on page 1116 (see compounds 1, 11c, and 42) and the first full paragraph in the right column of page 1116.

The rejection is respectfully traversed, and reconsideration is requested.

Katagiri *et al.* disclose a multi-step process for preparing 1-amino-4-(hydroxymethyl)-2-cyclopentene (compound 42) from 2-azabicyclo[2.2.1]hept-5-en-3-one (compound 1) in charts 6 and 13 on pages 1114 and 1116. As shown in Chart 6, an electron withdrawing group W is first attached to the nitrogen atom of 2-aza-bicyclo[2.2.1]hept-5-en-3-one (compound 1) to yield an *N*-substituted compound (10c). The *N*-substituted compound (10c) is reduced with sodium borohydride to yield compound 11c, which has the formula



See also lines 1-4 on the right column of page 1114. Compound 11c is then reacted with sodium nitrite in an acidic medium to yield 1-amino-4-(hydroxymethyl)-2-cyclopentene (compound 42). See chart 13 and lines 15-21 on the right column of page 1116.

In contrast, the presently claimed invention is a one step process for preparing 1-amino-4-(hydroxymethyl)-2-cyclopentene from 2-azabicyclo[2.2.1]hept-5-en-3-one. See page 3, lines 11-17, and examples 1.2-1.13, 4.1, and 4.2 of the instant application. The process includes reducing 2-azabicyclo[2.2.1]hept-5-en-3-one with a metal hydride to yield 1-amino-4-(hydroxymethyl)-2-cyclopentene. Katagiri *et al.* do not disclose or suggest reducing 2-azabicyclo[2.2.1]hept-5-en-3-one with a metal hydride to yield 1-amino-4-(hydroxymethyl)-2-cyclopentene.

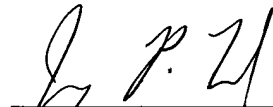
Furthermore, Katagiri *et al.* teach away from reducing 2-aza-bicyclo[2.2.1]hept-5-en-3-one with a metal hydride to form 1-amino-4-(hydroxymethyl)-2-cyclopentene. Katagiri *et al.* state that “the *N*-unsubstituted compound (1) is stable to sodium borohydride reduction” while similar *N*-

substituted compounds "gave under the same reaction conditions the corresponding ring-opened aminoalcohols (11 and 13)." Lines 1-4 on the right column of page 1114. Therefore, Katagiri *et al.* teach that 2-aza-bicyclo[2.2.1]hept-5-en-3-one is stable (or unreactive) with sodium borohydride. Hence, Katagiri *et al.* do not provide any motivation or a reasonable expectation of success for producing 1-amino-4-(hydroxymethyl)-2-cyclopentene (compound 42) by reducing 2-aza-bicyclo[2.2.1]hept-5-en-3-one (compound 1) with a metal hydride.

For the foregoing reasons, Katagiri *et al.* do not anticipate the presently claimed invention. Accordingly, applicants respectfully request withdrawal of this rejection.

It is believed, for the foregoing reasons, that the claims warrant allowance, and such action is earnestly solicited.

Respectfully submitted,



Jay P. Lessler

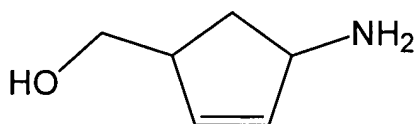
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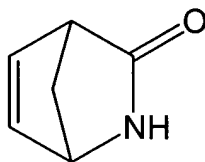
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Marked Up Claims
For U.S. Serial No. 09/198,427
(Accompanying April 30, 2001 Amendment)

1. (Amended) A process [Process] for the preparation of an aminoalcohol of the formula



[in the form of the racemate or one of its optically active isomers], comprising the step of reducing [the reduction of] 2-azabicyclo[2.2.1]hept-5-en-3-one of the formula



[in the form of the race mate or one of its optically active isomers] with a metal hydride to form the aminoalcohol.

2. (Amended) The process [Process] according to Claim 1, characterized in that the metal hydride used is a metal borohydride.

3. (Amended) The process [Process] according to Claim 1 or 2, characterized in that the reducing step [reduction] is carried out at a temperature of from -20 to 200° C.

• 4. (Twice Amended) The process [Process] according to [Patent] Claim 1 or 2, characterized in that the reducing step [reduction] is carried out in a solvent selected from the group consisting of an aprotic organic solvent, [or] protic organic solvent, and [or in a corresponding organic] mixtures thereof.

5. (Twice Amended) The process [Process] according to [Patent] Claim 1 or 2, characterized in that the reducing step [reduction] is carried out in the presence of an additive selected from the group consisting of water and univalent and polyvalent C₁₋₆ alcohols.